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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/452,753	Applicant(s) MANCHESTER ET AL.	
	Examiner David Odland	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-20,22-29,33,37-39,41-43 and 47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-20,22-29,33,37-39,41-43 and 47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 06/10/2004.

Claim Objections

2. Claims 2,3 and 6-13 are objected to because of the following informalities: the claims recite "The bus of Claim..." in the preambles but the parent claim (claim 1) recites "A telecommunications signal transmitted on a..." Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3 and 6-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites "A telecommunications signal transmitted on a..." A telecommunications signal is not a process, machine, article of manufacture or composition of matter, therefore, it is non-statutory subject matter.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-3, 6-7, 11-15, 17-20, 22, 24-26, 29, 37-39, 41 and 43 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of Manchester et al, U.S. Patent No. 6,628,657 B1, hereafter Manchester. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim similar subject matter.

- Claims 1-3, 6-7, 11-15, 17-20, 22, 24-26, 29, 37-39, 41 and 43, are directed toward the same subject matter defined in claims 1-9 of Manchester. The claims of Manchester do not expressly specify that the service channels are the same size as the time slots, or specify all of the identical structure of the claimed invention. However, it would be obvious to add the claimed structure specified in the instant application to implement the system that supports DS-0 and ATM services in a shared frame in the claims of Manchester. The invention Manchester claims could be modified to have the physical structure of the claimed invention, including a switch card, ports and interfaces. The size of the time slots in the claims of Manchester could also be modified to be two bytes wide. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the claims of Manchester, to vary the slot size and include structural elements to transmit and receive the data. One of ordinary skill in the art would have been motivated to do this since switch cards, ports, and interfaces are used to send and receive data across a bus. Switches also are used to separate the data so that it can be received at the appropriate destination. Modifying the slot size would have been obvious since computer data can be easily be broken up into sizes as small as one bit. It would be design choice to adjust how many bytes are in a service channel depending on the size needed to transport the ATM data.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3, 6, 11-15, 17-20, 22, 24-26, 29, 37-39, 41 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Appanna et al (US 6,647,021 B1, hereafter Appanna).

- Referring to claim 1, Appanna discloses a synchronous bus for a telecommunications node (col. 4, lns. 59-68), the bus comprising: a frame repeating at a defined interval (col. 2, lns. 20-55, col. 5, lns. 22-40); each frame comprising a plurality of time slots (service channels, col. 5, lns. 23-col. 6, lns. 50); a first plurality of service channels in at least one frame each transporting traffic for a DS-0 connection (table A, col. 5), every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for the DS-0 connection (DS-0 connections inherently have CAS signaling bits and Appanna discloses signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); and a second plurality of service channels in the frame together transporting an asynchronous transfer mode (ATM) cell (Table A and figure 4).

- Referring to claim 2, Appanna discloses the bus of Claim 1, wherein the defined interval comprises 125 microseconds and each service channel is two bytes in size (Table A, bits 0-15 are two bytes, col. 2, lns. 38-54).

- Referring to claim 3, Appanna discloses the bus of Claim 1, further comprising: a point-to-point link between each line card and a switch core of a telecommunications node; and each point-to-point link comprising the frame repeating at the defined interval (Figs. 6-9, col. 2, lns. 38-54).

- Referring to claim 6, Appanna discloses the bus of Claim 1, the set second plurality of service channels further comprising a block of contiguous service channels (Table A, col. 5).

- Referring to claim 11, Appanna discloses the bus of Claim 1, further comprising: each frame further comprising an overhead portion; the overhead portion comprising BPI bits (an internode communication channel); and the internode communication channel in at least one frame transporting control traffic generated by a line card of a telecommunications node transmitting the frame and destined for a disparate element of the telecommunications node (col. 7, lns. 21-43, backpressure bits are placed in the frame overhead section to communicate with the ports).

- Referring to claim 12, Appanna discloses the bus of Claim 11, wherein the disparate element of the telecommunications node comprises a disparate line card (col. 4, lns. 59-68, col. 7, lns. 22-43).

- Referring to claim 13, Appanna discloses the bus of Claim 11, wherein the disparate element of the telecommunications node comprises a switch card (col. 7, lns. 22-43).

- Referring to claim 14, Appanna discloses a telecommunications node, comprising: a line card (col. 4, lns. 59-68) operable to: generate a frame comprising a plurality of service channels each sized to individually transport DS-0 traffic insert DS-0 traffic into a first plurality of time slots (service channels) in the frame (col. 5, lns. 15-col. 6, lns. 60), every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for a DS-0 connection (DS-0 connections inherently have CAS signaling bits and Appanna discloses

signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); insert asynchronous transfer mode (ATM) cells into a second plurality of service channels in the frame (col. 5, lns. 22-40, Table A); repeat the frame at a defined interval on a synchronous bus (col. 2, lns. 38-54); and a narrowband bank control unit (BCU, switch core) operable to receive the frame from the synchronous bus and to synchronously switch the DS-0 traffic and the ATM cells (Fig. 6-9, col. 5, lns. 15-40).

- Referring to claim 15, Appanna discloses the telecommunications node of Claim 14, further comprising the line card operable to repeat the frame on a point-to-point link between the line card and the switch core (Fig. 6-9, col. 2, lns. 38-54).

- Referring to claim 17, Appanna discloses the telecommunications node of Claim 14, wherein each frame of the bus comprises an overhead portion including an BPI bits (internode communication channel) further comprising: the line card operable to: generate control traffic destined for a disparate element of the telecommunications node, to insert the control traffic into the internode communication channel of a frame and to transmit the frame to the switch core; and the switch core operable to switch the control traffic to the destination disparate element based on the position of the control traffic in the internode communication channel (col. 7, lns. 22-43).

- Referring to claim 18, Appanna discloses a method for communicating traffic between elements in a telecommunications node (Fig. 6-9, col. 4, lns. 59-68), comprising: repeating a frame at a defined interval on a synchronous bus (col. 2, lns. 38-54), providing a plurality of time slots (service channels) in each frame; in at least one frame, each transporting traffic for a DS-0 connection in a first plurality of service channels (col. 5, lns. 15-col. 6, lns. 50), every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for the DS-0 connection (DS-0 connections inherently have CAS signaling bits and

Appanna discloses signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); in the frame, transporting an asynchronous transfer mode (ATM) cell in a set second plurality of service channels; and synchronously switching the DS-0 traffic and the ATM cell in the frame (col. 5, lns. 21-col. 6, lns. 50).

- Referring to claim 19, Appanna discloses the method of Claim 18, wherein the each service channel is two bytes in size (bits 0-15, table A, col. 5), further comprising repeating the frame at 125 microsecond intervals (col. 2, lns. 38-54).

- Referring to claim 20, Appanna discloses the method of Claim 18, wherein the synchronous bus comprises a point-to-point link, further comprising repeating the frame at a defined interval on a point-to-point link (Fig. 6-9, col. 2, lns. 38-54).

- Referring to claim 22, Appanna discloses the method of Claim 18, wherein the second plurality of service channels comprise a block of contiguous service channels (Table A, col. 5).

- Referring to claim 24, Appanna discloses the method of Claim 18, further comprising: providing in each frame an overhead portion including BPI bits (an internode communication channel); generating control traffic at a line card of a the telecommunications node; inserting the control traffic into an internode communication channel of a frame; transmitting the frame from the line card to a switch core of the telecommunications node; and synchronously switching the control traffic at the switch core to a destination element in the telecommunications node based on a position of the control traffic in the internode communication channel (col. 7, lns. 20-45).

- Referring to claim 25, Appanna discloses a telecommunications signal transmitted on a synchronous bus of a telecommunications node (col. 4, lns. 59-68), comprising: a frame transmitted in a 125 microsecond interval (col. 2, lns. 38-54); the frame comprising a plurality of time slots (service channels); a first plurality of service channels each transporting traffic for a DS-0 connection

(col. 5, Table A), the service channel in the first plurality of service channels comprising including a current channel associated signaling (CAS) value for the DS-0 connection (DS-0 connections inherently have CAS signaling bits and Appanna discloses signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); and a second plurality of service channels together forming a block of contiguous service channels transporting an asynchronous transfer mode (ATM) cell, the block of contiguous service channels located at a position in the frame associated with a destination element for the ATM cell (col. 5, lns. 20-col. 6, lns. 50).

- Referring to claim 26, Appanna discloses the telecommunications signal of Claim 25, the frame further comprising an overhead portion including BPI bits (an internode communication channel), the internode communication channel comprising: control traffic generated by a line card transmitting the frame; and the control traffic located at a position in the internode communication channel associated with a destination element for the control traffic (col. 7, lns. 20-45).

- Referring to claim 29, Appanna discloses a line card for a telecommunications node, comprising: a port operable to receive traffic from an external link; an internal interface operable to connect to a point-to-point link of a synchronous bus (Fig. 6-9, col. 2, lns. 38-54); and a traffic processor operable to: generate a frame comprising an overhead portion having BPI bits (an internode communication channel) and a service traffic portion comprising a plurality of time slots (service channels, col. 5, Table A), the plurality of service channels each sized to individually transport DS-0 traffic; generate control traffic destined for a disparate element in the telecommunications node; insert the control traffic into a slot in the internode communication channel associated with the disparate element; insert DS-0 traffic received at the port and a current channel associated signaling (CAS) value for the DS-0 traffic into every one of a first plurality of service channels in the frame (DS-0 connections inherently have CAS signaling bits and Appanna

discloses signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); insert an asynchronous transfer mode (ATM) cell received at the port into a second plurality of service channels in the frame associated with the disparate element for the ATM cell within the telecommunications node; and transmit the frame on the point-to-point link of the synchronous bus (col. 5, lns. 15-col. 6, lns. 50).

- Referring to claim 37, Appanna discloses a system for communicating traffic between elements in a telecommunications node, comprising: a computer-readable medium; and software stored on the computer-readable medium, the software operable to: repeat a frame at a defined interval on a synchronous bus (col. 2, lns. 38-54, col. 4, lns. 59-68), to provide a plurality of time slots (service channels) in each frame (col. 5, Table A), the plurality of service channels each sized to individually transport DS-0 traffic (table A); transmit, in at least one frame, traffic for a DS-0 connection in a first plurality of service channels (table A), every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for the DS-0 connection (DS-0 connections inherently have CAS signaling bits and Appanna discloses signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); to transmit in the frame an asynchronous transfer mode (ATM) cell in a second plurality set of service channels; and to synchronously switch DS-0 traffic and ATM cells received in a frame (col. 5, lns. 20-col. 6, lns. 50).

- Referring to claim 38, Appanna discloses the system of Claim 37, wherein the each service channel is two bytes in size (Table A, bits 0-15), the software operable to repeat the frame at 125 microsecond intervals (col. 2, lns. 38-54).

- Referring to claim 39, Appanna discloses the system of Claim 37, wherein the synchronous bus comprises a point-to-point link, the software further operable to repeat the frame at a defined interval on the point-to-point link (Fig. 6-9, col. 2, lns. 38-54).

- Referring to claim 41, Appanna discloses the system of Claim 37, wherein the second plurality of service channels comprises a block of contiguous service channels (Table A, col. 5).

- Referring to claim 43, Appanna discloses a traffic processor for a line card of a telecommunications node (col. 4, lns. 59-68), comprising: a computer-readable medium; and software stored on the computer-readable medium, the software operable to: generate a frame comprising a plurality of time slots (service channels) and an overhead portion having an BPI bits (internode communication channel) in and a service traffic portion comprising a plurality of time slots (service channels, col. 5, lns. 8-40); to generate control traffic destined for a disparate element in the telecommunications node (col. 7, lns. 22-43), the control traffic comprising a control message free of addressing information (col. 7, lns. 22-42, the bits indicate back pressure conditions, and do not have address information in the BPI bits), insert the control traffic into a slot in the internode communication channel associated with the disparate element (col. 7, lns. 22-43); insert DS-0 traffic received at a port and a current channel associated signaling (CAS) value for the DS-0 traffic into every one of a first plurality of service channels in the frame (DS-0 connections inherently have CAS signaling bits and Appanna discloses signaling bits for the DSO's (see time slot 4 described in figure 4 and Table A and column 6 lines 37-40); insert an asynchronous transfer mode (ATM) cell received at a port into a second plurality of service channels in the frame associated with the disparate element for the ATM cell within the telecommunications node; and transmit the frame on a point-to-point link of a synchronous bus (col. 5, lns. 20-col. 6, lns. 50).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appanna.

- Referring to claim 7, Appanna discloses the bus of Claim 6, wherein the defined interval comprises 125 microseconds, each service channel is two bytes in size (table A), but does not expressly disclose the block of contiguous service channels comprise 27 service channels. The system of Appanna could be modified to place all of the ATM time slots adjacent to one another in 27 contiguous time slots. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna, to have all of the ATM time slots adjacent to one another. One of ordinary skill in the art would have been motivated to do this since an ATM cell has 53 bytes, making 27 two-byte channels next to one another would allow for the ATM cell to be placed consecutively together in one location in the frame. It would simplify the system of Appanna since the system would only have to remove the data from one section, instead of being placed in non-contiguous blocks.

11. Claims 8-10, 16, 23, 27, 28, 33, 42 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appanna in view of Frey et al (USP 5,982,783).

- Referring to claim 8, Appanna discloses the bus of Claim 1, but does not expressly disclose the set second plurality of service channels comprising a first set of service channels, further comprising a second set of service channels together transporting traffic for an integrated services

digital network (ISDN) connection. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN connection. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

- Referring to claim 9, Appanna discloses the bus of Claim 8, the second set of service channels further comprising a block of contiguous service channels together transporting two B-channels and a D-channel of the ISDN connection. ISDN inherently has at least two B-channels and a D-channel. This is a standard ISDN-BRI format.

- Referring to claim 10, Appanna discloses the bus of Claim 9, wherein the defined interval comprises 125 microseconds and each service channel is two bytes in size (col. 2, lns. 38-54, Table A, col. 5).

- Referring to claim 16, Appanna discloses the telecommunications node of Claim 14, but does not expressly disclose wherein each service channel is sized to transport in connection with ether a third plurality of service channels integrated services digital network (ISDN) traffic, further comprising: the line card operable to insert the ISDN traffic into the third plurality of service channels in the frame; and the switch core operable to synchronously switch the ISDN traffic. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN

connection. The line cards and the BCU would interact to switch the ISDN data. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

- Referring to claim 23, Appanna discloses the method of Claim 18, but does not expressly disclose further comprising transporting traffic for an integrated services digital network (ISDN) connection in a third plurality of service channels of the frame. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN connection. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

- Referring to claim 27, Appanna discloses the telecommunications signal of Claim 25, but does not expressly disclose a set third plurality of service channels in the frame together transporting traffic for an integrated services digital network (ISDN) connection. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN connection. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been

motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

- Referring to claim 28, Appanna discloses the telecommunications signal of Claim 27, the set third plurality of service channels comprising a block of contiguous service channels together transporting two B-channels and a D-channel of the ISDN connection. ISDN inherently uses this format. The 2B+D format is well-known and widely used.

- Referring to claim 33, Appanna discloses the line card of Claim 29, but does not expressly disclose wherein the traffic processor is further operable to insert integrated services digital network (ISDN) traffic into a set third plurality of service channels in the frame. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN connection. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

- Referring to claim 42, Appanna discloses the system of Claim 37, but does not expressly disclose wherein the software is further operable to transmit traffic for an integrated services digital network (ISDN) connection in a third plurality of service channels of the frame. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN connection. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify

the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

- Referring to claim 47, Appanna discloses the traffic processor of Claim 43, but does not expressly disclose wherein the software is further operable to insert integrated services digital network (ISDN) traffic into a set third plurality of service channels in the frame. Frey teaches that DS0 channels can be used to transport ISDN data (col. 17, lns. 43-47). DS0 is the foundation for ISDN. Telephone companies built the 64kbps channels of ISDN on top of 64kbps channels of DS0. The system of Appanna could be modified to have channels to transport an ISDN connection. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the system of Appanna to transmit ISDN data. One of ordinary skill in the art would have been motivated to do this since ISDN is used to transport digital data over the telephone network. Using ISDN is the modernization of the POTS network to transport digital data.

Response to Arguments

12. Applicant's arguments with respect to claims 1-47 have been considered but are not persuasive.

On page 11 last paragraph, the Applicant argues that the Examiner has not provided any basis in fact and/or technical reasoning to support the Examiner's assertion that the DS-0 connections inherently have CAS signaling bits. The Examiner would like to point out that it is well know in the art that a DS-O connection is a 64Kbps connection for transporting digitized voice over POTS channels. Calls made over POTS channels are set up and torn down using signaling bits and in order for the DS-0 data to be properly processed by the Central Office (CO) there ***must*** be signaling bits

present or else the calls will not be able to be properly processed. Thus, the DS-0 channels of Appanna *must* have channel associated signaling. Nonetheless, Appanna explicitly discloses that all the DS-0 channels of the SBI frame have corresponding signaling bits. Specifically, Appanna discloses that each DS-0 of the frame has signaling bits located in the fourth time slot of the frame (see time slot #4 in figure 4 and Table A and column 6 lines 37-40). Thus, not only is it inherent that the DS-0 connections have associated signaling but the Appanna reference itself discloses such signaling.

Also on page 11 last paragraph, the Applicant argues that the "Examiner fails to illustrate how ***every*** offered time slot transporting DS-0 traffic includes a CAS value." The Examiner respectfully disagrees. The claim does not recite such a limitation. The claim merely recites "...every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for the DS-0 connection..." Thus, the claim does not mention anything about time slots nor does it recite that any time slots *include* the signaling value itself. Furthermore, the claim does not recite that each channel is made up of a *single* time slot. In Appanna, each DS-0 connection does *comprise* signaling values, which are transported in time slot #4. Furthermore, the claim recites "...a first plurality of service channels in at least one frame..."(emphasis added). This implies that the plurality of service channels may span more than one frame. Thus another way to interpret Appanna is that a single 'service channel' can be thought of as all DS-0's and the signaling time slot #4 of a single frame and thus the 'first plurality of service channels' as recited in the claim can be made up of a first 'service channel' in a first frame and a second 'service channel' in a second frame of the Appanna system wherein the first frame of Appanna includes the first channel of the plurality of service channels and is made up of all DS-0's and the signaling time slot #4 of the first frame and the second frame of Appanna includes the second

channel of the plurality of service channels and is made up of all DS-0's and the signaling time slot#4 of the second frame. Therefore, Appanna would be disclosing the required "...a first plurality of service channels in at least one frame each transporting traffic for a DS-0 connection, every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for the DS-0 connection..."

On page 12 first paragraph, the Applicant suggests that the Examiner provide a reference if the Examiner attempts to take Official Notice. The Examiner would like to note that no Official Notice has been taken.

On page 12 last paragraph, the Applicant contends that the claim is allowable over the prior art for the same reasons that were previously stated in the arguments regarding the rejection of claim 1. The Examiner disagrees with these arguments for the same reasons discussed above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland whose telephone number is 703-305-3231. The examiner can normally be reached on Monday - Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

deo

August 21, 2004

HASSAN KIZOU
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